

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 H04L1/00

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H04L H04Q G10L H03M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2003/198312 A1 (DAS ARNAB ET AL) 23 October 2003 (2003-10-23) paragraph '0004! – paragraph '0012! paragraphs '0024!, '0025!, '0030! paragraph '0045! – paragraph '0049! paragraphs '0051!, '0056!, '0057! paragraph '0084! – paragraph '0099! paragraphs '0111!, '0112!, '0116! paragraph '0123! figure 4	1-18
A	US 2002/154611 A1 (KHULLAR ANDERS) 24 October 2002 (2002-10-24) paragraph '0006! – paragraph '0011! paragraphs '0014!, '0015! paragraph '0027! – paragraph '0040!	1-18

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

\* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
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- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the Invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

10 January 2005

Date of mailing of the international search report

18/01/2005

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 701 294 A (WARD TORBJORN ET AL) 23 December 1997 (1997-12-23) column 5, line 46 - column 6, line 10 column 7, line 24 - column 9, line 15 figures 6,7A,7B abstract -----	1-18
A	US 6 539 205 B1 (KOMAILI JALEH ET AL) 25 March 2003 (2003-03-25) column 1, line 31 - line 40 column 2, line 18 - line 56 column 8, line 12 - column 9, line 19 column 12, line 29 - line 35 figure 3 -----	1-18
A	EP 1 255 368 A (SIEMENS INF & COMM NETWORKS) 6 November 2002 (2002-11-06) paragraph '0013! paragraph '0022! - paragraph '0027! paragraphs '0033!, '0034!, '0052! paragraphs '0074!, '0077! figure 16 abstract -----	1-18

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/052013

Patent document cited in search report		Publication date	Patent family member(s)			Publication date
US 2003198312	A1	23-10-2003	NONE			
US 2002154611	A1	24-10-2002	WO EP	02069520 A1 1364472 A1		06-09-2002 26-11-2003
US 5701294	A	23-12-1997	AU CN EP WO	7150696 A 1203009 A ,B 0853863 A1 9713388 A1		28-04-1997 23-12-1998 22-07-1998 10-04-1997
US 6539205	B1	25-03-2003	TW WO	454394 B 9949610 A1		11-09-2001 30-09-1999
EP 1255368	A	06-11-2002	EP BR WO EP US	1255368 A1 0209278 A 02091655 A1 1384344 A1 2004081248 A1		06-11-2002 13-07-2004 14-11-2002 28-01-2004 29-04-2004